In this article we analyse Russian definitional sentences, which are a type of generic sentence. We focus on the structure and meaning of canonical definitions, which express an identity/identification relation between two nominal concepts. In Russian such definitions are given in the form of a bi-nominative structure: \( NP_1 \) – èto \( NP_2 \) (\( NP_1 \) is \( NP_2 \)). We argue that definitional sentences are copular, and they are non-predicational, showing similarities to equative, identificational and specificational sentences. We also argue that (i) both NPs in definitional sentences are kind-referring, whereas èto is non-referential; (ii) a copula è be maps a kind entity (the denotation of \( NP_2 \)) to itself (identity function); and (iii) the neuter element èto introduces a presentational function that maps the kind entity in postcopular position to a function that looks for another kind entity (the one corresponding to \( NP_1 \)) and composes a definitional generic sentence.

**Keywords:** definitional generic sentences; non-predicational copular sentences; kind reference; identity/identification; Russian

### 1 Introduction

The aim of this paper is to provide an analysis of definitional generic sentences in Russian of the two types exemplified in (1).

\[
\begin{align*}
\text{(1) a. Gippopotam – èto begemot.} & \quad \text{gippopotam.NOM.SG.M that hippopotamus.NOM.SG.M} \\
& \quad \text{‘The/a gippopotam is the/a hippopotamus.’} \\
\text{b. Gippopotam – èto (tolstokožee) mlekopitajuščee} & \quad \text{gippopotam.NOM.SG.M that thick-skinned mammal.NOM.SG.N} \\
& \quad \text{(živuščee v Afrike).} \\
& \quad \text{living in Africa} \\
& \quad \text{‘The/a gippopotam is the/a (thick-skinned) mammal (living in Africa).’}
\end{align*}
\]

Superficially, such a bi-partite structure of definitions in Russian looks as follows: \( NP_1 – èto NP_2 \) (\( NP_1 \) is \( NP_2 \)), signalled prosodically by a low-boundary tone before èto and by a dash in written texts. Regarding the difference between (1a) and (1b), whereas (1a) introduces an identity relationship between two kind expressions such that the meaning of (1a) can be paraphrased as follows ‘As for the kind named by the noun gippopotam, it is identical to the kind named by the noun begemot’, (1b) introduces an identification relationship between two kind expressions. However, since mlekopitajuščee ‘mammal’ is

1 Note that, unlike what we see in Russian, in languages with articles (e.g., English), the two nominal expressions being related in definitional sentences are introduced by either a definite or an indefinite article, depending on constraints that are not analyzed in this paper.

2 Note that \( NP_1 \) and \( NP_2 \) are convenient labels for the two nominals, where the number indicates the surface order.
modified by a set of properties that restrict this kind-referring expression to a subkind that also refers to a kind (Krifka 1995: 402), the meaning of (1b) can be paraphrased as ‘As for the kind named by the noun gippopotam, it is identified with the kind named by the nominal expression tolstokožee mlekopitajuščee živuščee v Afrike’.

In this paper we emphasize the semantic similarity between the identity/identification relationship that holds between the two kind expressions that participate in definitional generic sentences. NP2 in (1b) differs from NP2 in (1a) in being a modified kind. We assume, following Borik & Espinal (2015; in press), that a modified kind is an expression of D-genericity (Krifka et al. 1995); that is, it is a definite kind, modified by a classifying expression that preserves kind reference. Modified kinds are kind-referring expressions that are as capable of participating in a relationship of identity/identification as unmodified kinds. We also assume that the taxonomic reading of the postcopular part of the definition in (1b) is associated with encyclopedic knowledge of the world. Evidence that supports the claim that the modified kind in (1b) refers itself to a kind comes from the fact that the two nominal expressions (NP1 and NP2) could be reversed, as they are in (2).

(2) a. Begemot – èto gippopotam.
   hippopotamus.NOM.SG.M that gippopotam.NOM.SG.M
   ‘The/a hippopotamus is the/a gippopotamus.’

   b. (Situation: in a quiz game, as a reply to a question such as ‘What is a thick-skinned mammal living in Africa?’)
   Tolstokožee mlekopitajuščee živuščee v Afrike – èto
   thick-skinned mammal.NOM.SG.N living in Africa that
   gippopotam.
   gippopotam.NOM.SG.M
   ‘The/a thick-skinned mammal living in Africa is the/a gippopotam.’

In this introduction we set out our topic and discuss the main concepts involved in previous analyses of definitional sentences. In Section 2 we support the hypothesis that Russian definitional sentences that define nominal concepts are similar to non-predicational copular (i.e., equative, identificational and specificational) sentences. In Section 3 we present an analysis of the structure and meaning of Russian definitional copular sentences that contains the two following ingredients: (i) the definiendum (NP1), which is conceived as an aboutness topic; and (ii) the definiens (the PredP/TP copular sentence), which contains a neuter demonstrative pronoun èto whose main functions are to introduce the entity referred to by NP2 and to relate this entity to a one-place relation that identifies NP2 with NP1. The definiens also consists of a copular verb (usually null) whose meaning corresponds to an

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3 In this paper we are treating identity and identificational relations on a par with each other, since the analysis we offer applies similarly to both of them. This explains our use of the slash notation.

4 Note that we depart from Dayal (2004), who assumes that common nouns are ambiguous in the sense that they have two possible denotations, one in the object domain and the other in the taxonomic domain. According to Dayal (2004: 424), “there are two ways of deriving the taxonomic interpretation, either by building an ambiguity into the denotation of the common noun or into the determiner. Common nouns, under the first approach, would systematically denote properties of ordinary individuals or properties of subkinds, and standard determiners would combine compositionally with the latter to yield taxonomic readings. Alternatively, determiners could be ambiguous between the familiar functions built on properties of individuals but map them onto the taxonomic domain before building up the relevant meanings”. While Dayal adopts the first approach, see Borik & Espinal (2015) for an approach according to which neither the meaning of the noun nor the meaning of the determiner is ambiguous, and for the view that the conditions under which a modified kind can still be interpreted as kind-referring are similar to the conditions that underlie the well-established kind restriction (Krifka et al. 1995; Dayal 2004); whether something is interpreted as a kind or as a subkind depends on general extralinguistic information about the world and social conventions; it does not depend on knowledge of the language.
identity function, and a postcopular NP2 that controls agreement with the copula, when present. We therefore postulate the structure in (3).

\[(3) \quad \left[ \text{TopP} \left[ \text{NP}_1 \right] \ldots \left[ \text{PredP} \left[ \text{èto} \right] \left[ \text{Pred} \left[ \text{BE} \right] \left[ \text{NP}_2 \right] \right] \right] \right]\]

Finally, Section 4 concludes the paper.

1.1 On definitions and definitional sentences

By a definition or a definitional sentence in this work we refer to a sentence that explains the meaning of a lexical item, in other words, the answer to the question ‘What is X?’ or ‘What does X mean/refer to?’. Definitions are found everywhere, in dictionaries, encyclopedias and textbooks, but also in speech contexts for pedagogical and practical purposes, whether academic or non-academic. They are significant for human cognition as they let speakers reveal the lexical meaning of a concept in terms of language, and they play an important role in language acquisition as well (Krifka 2013a).

Definitions constitute a form of meta-language that facilitates the use and understanding of lexical items. In this sense they are different from other types of sentences as they communicate not about the world but about the language being used by participants in a linguistic interaction. They introduce a new term or impose a particular understanding on an existing term.

According to what has been said in the previous paragraph, definitional sentences represent a clear-cut manifestation of genericity. On the one hand, the term to be defined is expressed by means of a nominal expression that does not have a specific referent in the real world but is the name of a kind (an entity that is not spatiotemporally localized), thus introducing a case of D-genericity (Gerstner-Link & Krifka 1993). In addition, the term to be defined introduces a concept. Regarding the relation between kinds and concepts, it has been postulated that concepts describe kinds/categories, and kinds are reifications of conceptual descriptions (Mueller-Reichau 2011: 46–47).

On the other hand, definitions are expressions of I-genericity, as they are characterizing statements about kinds (Krifka et al. 1995). Since such sentences are not bound to specific times or worlds, they can be claimed to be atemporal (Greenberg 2002); they represent regulations (Cohen 2001) because they describe general truths and are law-like.

Unfortunately, although definitions have received the attention of philosophers since ancient times (Gupta 2015), they have been understudied in formal linguistics, with the exceptions we will comment on below. From a linguistic perspective they have been studied mainly in lexicography, in order to establish what a good and valid definition of a lexical entry is, aiming at precision and clarity. However, the syntactic and semantic characteristics of definitions in different languages have been largely neglected within linguistic theory.

In the next section we consider two major distinctions that have been proposed in relation to the status of definitions.

1.2 Definitional generics vs. descriptive generics

Krifka (2013a), following Lawler (1973), Burton-Roberts (1977) and Cohen (2001), claims that definitional sentences are fundamentally different from descriptive sentences, even though both types of sentences are generic. Definitions communicate about the language used to describe the world, while descriptions communicate about patterns that appear in

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5 See Krifka (1995) for a defense of the thesis that kinds are concepts, and Mueller-Reichau (2011) for a defense of the thesis that kinds are sortal concepts: maturation and language acquisition lead human beings to “sort (physical) objects into kinds of objects, following the linguistic practice of the social group with which we grow up” (Mueller-Reichau 2011: 35).
the world, presupposing that the language is fixed and the same for all participants in the interaction. This difference is illustrated by the well-known examples from Lawler (1973) presented in (4) and (5).

(4) Madrigals are polyphonic. \textit{definitional generic}

(5) Madrigals are popular. \textit{descriptive generic}

Sentence (4) explains what madrigals are, providing their principled characteristics, their “essence” (in Aristotle’s terms), while sentence (5) asserts something about the world in which madrigals are found. Considering their analytic status, Burton-Roberts (1977) claims that definitions are meta-predications, for they involve concepts (in the sense used by Frege): the \textit{polyphonic} concept is predicated of the \textit{madrigal} concept. Furthermore, we can rephrase (4) as ‘to be a madrigal is to be polyphonic’, but we cannot rephrase (5) as ‘to be a madrigal is to be popular’.

Note, furthermore, that definitions of the type illustrated in (4) are partial (Krifka 2013a: 381) precisely because they are predicational, introducing adjectival properties. In contrast, those definitions of the type illustrated in (1) involve either an identity/identification between kind-referring expressions, which indicates that the type of definitional generics addressed in this paper are not partial, but full, classical definitions.

1.3 \textit{Definiendum} and \textit{definiens}

Definitions are not a uniform class of sentences. Different sources (e.g., dictionaries, encyclopedias, speakers, etc.) may give different bits of information and still be effective in providing the meaning of a lexical item. Moreover, definitions may be expressed with the help of various types of sentences, among which binominal copular sentences of the type ‘NP1 is NP2’ are common. Such sentences represent potential answers to the questions ‘What is X?’ or ‘What does X mean/refer to?’, which are canonical ways of requesting a definition (Burton-Roberts 1986) and establishing what can be called the definitional mode of speaking. The response to this question presupposes knowledge of X and consequently knowledge of the existence of the kind entity X.

According to Aristotle, a definition is a statement that gives the essence of a thing (Topics, I.5, see also Cohen 2001: 14).\textsuperscript{7} Classical or canonical definitions consist of a name of the object to be defined followed by a list of the most salient characteristics of the prototypical object. In canonical definitions, which typically have the form of a copular sentence, the term that is defined is called the \textit{definiendum}, and it is the pre-copular part of the sentence. The postcopular part defines the precopular NP and is called the \textit{definiens}. The \textit{definiens} consists of the head noun, representing the \textit{genus} (class, species) and, possibly, additional properties (\textit{differentia}) that distinguish the \textit{definiendum} from other possible subdivisions (subclasses) of the \textit{genus} (see Eringa 1981; Cormack 1998). From a linguistic perspective these additional elements of the \textit{definiens} are commonly expressed by means of adjectives, prepositional phrases, and subordinate clauses, as illustrated also in (6). In the postcopular part, \textit{mammal} is the \textit{genus}, and \textit{aquatic} and \textit{terrestrial} correspond to the \textit{differentia}.

\textsuperscript{6} Another important difference between these sentences discussed in the literature is that in the English sentence in (4), instead of a bare plural, an indefinite singular nominal can also be used as a subject, while this is not possible in (5). See (i) and (ii).

\begin{itemize}
  \item[(i)] A madrigal is polyphonic
  \item[(ii)] #A madrigal is popular.
\end{itemize}

Cohen (2001), however, points out that (ii) becomes more acceptable, if it is rephrased as in (iii).

\begin{itemize}
  \item[(iii)] A madrigal is a popular song.
\end{itemize}

\textsuperscript{7} See Sager (2000) and Gupta (2015) for further details.
(6)   a. The whale is an aquatic mammal.
      b. The elephant is a terrestrial mammal.

It is also important to bear in mind that different types of relationships can be postulated between the *definiendum* and the *definiens*. In terms of Cormack (1998: 184), according to whom the denotation of a noun is a set, the English definition in (7a) represents a case of set-identity while (7b) is a case of set-inclusion: the former introduces a relation of identity between the denotation of the two nominal expressions, and the latter claims that the individual having the property of being a *rabbit* is a member of the set of individuals having the property of being an *animal*.

(7)   a. An oculist is an eye-doctor.
      b. A rabbit is an animal.

In our terms, (7a), like previous example (1a), introduces an identity relationship between two kind expressions, the one corresponding to the *definiendum* and the one corresponding to the genus of the *definiens*. It could be rephrased as ‘As for the kind named by the noun *oculist*, it is identical to/identified with the kind named by the noun *eye-doctor*, and the other way around’. However, example (7b), like previous example (1b), introduces an identification relationship between two kind expressions, the one corresponding to the *definiendum* and the one corresponding to the genus part of the *definiens*. In this case it could be rephrased as ‘As for the kind named by the noun *rabbit*, it is identified with the kind named by the noun *animal*, but not the other way around’.

From a discourse perspective, and with specific reference to the sentences of interest in this study, a reviewer has suggested that Russian definitional generic sentences may be viewed as contractions of a specific type of question-answer pair. Thus, the *definiendum* can be considered a short form of a question and the *definiens* a short form of an answer. Consider (8) for (1a, b).

(8)   Q. What does gippopotam refer to?
     A. a. Èto [what gippopotam refers to] BE begemot.
        b. Èto [what gippopotam refers to] BE tolstokožee mlekopital’nikh živuščee v Afrike.

Under this perspective the dash used in (1a, b) is a reflection of the sentence border between the Q-A pair, and the neuter pronoun èto would have a propositional discourse referent (see Krifka 2013b). We will refine this intuition in Section 3, where we claim that NP1 is an aboutness topic, and èto a presentational pronoun.

In the next section we move to Russian definitional sentences that define nominal concepts, which are identified with kinds (Krifka 1995; Mueller-Reichau 2011). We support the hypothesis that they are non-predicational, similar to equatives and identificational and specificational copular sentences.

2 Definitional sentences as a type of copular sentence in Russian

2.1 A brief overview of copular sentences: NP1 is NP2

Copular sentences are traditionally divided into predicational (9) and non-predicational ones. The latter include equative (i.e., identity) (10), identificational (11) and specificational sentences (12). The main difference between these sentences is that in (9) NP2 is non-referential, while it is referential in the others (10)–(12). By contrast, NP1 is

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referential in (9) and (10), but it is less referential in (11) and (12). In the latter it has even been considered predicative.9

(9) Mark is a doctor. \hspace{0.5cm} \textit{predicational}

(10) Samuel Clemens is Mark Twain. \hspace{0.5cm} \textit{non-predicational: equative}

(11) That’s Mark. \hspace{0.5cm} \textit{non-predicational: identificational}

(12) The problem is Mark. \hspace{0.5cm} \textit{non-predicational: specificational}

In relation to the latter claim the standard wisdom is that in a specificational clause the complement is focus and the subject is topic, and the reason why the subject is always topic is that this is considered a precondition for obtaining a specificational clause.10

Syntactically, in copular sentences the predication is claimed to be mediated by the projection of a functional head Pred (Bowers 1993; Svenonius 1994; Adger & Ramchand 2003; and others), as represented in (13).11

\[
\begin{align*}
\text{TP} & \\
\text{PredP} & \\
\text{Pred} & \text{NP}
\end{align*}
\]

In the case of predicational, equative and identificational copular sentences, it has been proposed that a referential NP subject moves to a SpecTP position. By contrast, in specificational sentences it has been suggested in the literature (Mikkelsen 2006) that a predicative

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9 Evidence for this is provided by the pronouns allowed in a tagged clause, as illustrated in (i–iv). See Mikkelsen (2005) and Moltmann (2013) for other tests.

(i) Mark is a doctor, isn’t he?
(ii) Samuel Clemens is Mark Twain, isn’t he?
(iii) That’s Mark, isn’t it?
(iv) The problem is Mark, isn’t it?

10 Note that, according to Higgins (1973), the subject and predicate of these four types of copular sentences are assumed to have different referential properties.

(i) \begin{tabular}{|l|l|l|}
\hline
Type & Subject & Predicate \\
\hline
Predicational & referential & predicational \\
Identity & referential & referential \\
Identificational & referential & identificational \\
Specificational & superscriptional & specificational \\
\hline
\end{tabular}

11 In this paper we do not deal with the DP vs. NP debate which revolves around the structure of languages without articles (Bošković 2005; Pereltsvaig 2007; Bošković & Gajewski 2008; and others), and we use the label NP for any nominal expression.

See also Cyrino & Espinal (2015) for a discussion of the structure of bare nominals in Brazilian Portuguese.
NP that bears a topic feature moves to SpecTP, the output of this movement being a sort of copular inversion structure in which NP2 may show non-canonical agreement with the copula in some languages. We will come back to this issue below.

Sometimes identificational sentences have been considered a special case of specificational sentences (Mikkelsen 2004), and specificational sentences have been claimed to show different properties in different languages. Thus, Partee (2010) comes to the conclusion that specificational sentences in English and Russian differ at the syntactic level: in the former NP1 is the syntactic subject, while in the latter it is NP2. In Russian, NP2 is always in the nominative and the verb agrees with it. However, the meaning of specificational sentences is the same in both languages: NP1 expresses a property and NP2 is referential (type <e>). Their information structure is also the same: NP1 is discourse-old (i.e., the topic), while ‘is NP2’ is new information.

Semantically, it should be noted that in copular sentences referential NPs (e.g., Mark, Samuel Clemens, Mark Twain, that) refer to individual entities, and reference is achieved by means of a proper name, a definite description or a deictic demonstrative pronoun. It might well be the case, however, that referential NPs of copular sentences have kind reference, as illustrated in (14).\[^{12}\] This is important because in definitions, as exemplified in (1a, b), NP1 and NP2 both have kind reference, that is, they both refer not to ordinary objects but to abstract entities (i.e., kinds conceived as abstract sortal concepts; Mueller-Reichau 2011).

\[14\]

\[\begin{array}{ll}
\text{a. The dinosaur was a reptile.} & \text{predicational} \\
\text{b. Ursus is the bear.} & \text{non-predicational}
\end{array}\]

Let us now look at definitional sentences in more detail. Which type of copular sentences are they? Are they predicational or not?

Declerck (1988) considers definitions to be different from predicational sentences on the grounds that the former are meant to explain the contents of the concept or its use to the hearer, while the latter are meant to ascribe some property to the subject. Roy (2013), on the other hand, views defining sentences as a subclass of predicational copular sentences, claiming that they ascribe a property that is salient enough to “define” an individual as a particular member of a class of individuals (Roy 2013: 35).\[^{13}\] However, note that Roy, as is commonly the case in the studies of copular sentences, deals with NPs that – when referential – only refer to individuals, not to abstract concepts or kind entities, as is arguably the case in definitional copular sentences, which we focus on in this article.

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\[^{13}\] Based on French data, Roy (2013: 35–37) shows that the interpretational differences between copular sentence types (defining vs. characterizing) correlate with grammatical differences: in defining sentences (i) the predicate is expressed by an indefinite singular nominal, while in characterizing sentences (ii) a bare singular nominal is found in this syntactic position. Consider the following examples (from Roy 2013: 37).

\[\begin{array}{l}
\text{(i) Raymond est un acteur.} \\
\text{Raymond is an actor}
\end{array}\]

\[\begin{array}{l}
\text{(ii) Raymond est acteur.} \\
\text{Raymond is actor}
\end{array}\]

‘Raymond is an actor.’

It should be noted (though this is not discussed in Roy 2013) that canonical definitional copular sentences pattern with (i), that is with “defining” sentences, since in French the postcopular nominal expression in (iii) cannot be expressed by means of a bare nominal.

\[\begin{array}{l}
\text{(iii) Le lion est *(un) félin.} \\
\text{the lion is a feline}
\end{array}\]

‘The lion is a feline.’
In the next section we move on to definitional sentences in Russian. We first discuss the issue of whether they are predicational or non-predicational, and we show that definitional sentences are non-predicational, as they differ from predicational ones not only semantically but also syntactically. We also show that definitional sentences have similarities with equative, identificational and specificational sentences, whose main common characteristic is that NP2 is referential.

2.2 Russian definitional sentences: Non-predicational copular sentences

Russian definitional sentences of nominal concepts that describe kinds/categories are normally expressed by a bi-nominative copular sentence; that is, both the precopular and the postcopular NPs are in the nominative case. Note that this is the situation no matter whether the relationship between the definiendum and the definiens is one of identity or identification. Let us consider (15) (the parallel to English (7)).

   oculist.NOM.SG.M that eye doctor.NOM.SG.M  
   ‘The/an oculist is the/an eye doctor.’

   rabbit.NOM.SG.M that animal.NOM.SG.N  
   ‘The/a rabbit is an animal.’

Note that in both definitions a pronominal morphosyntactically invariant element èto, originating from a demonstrative pronoun, appears to be obligatory in between the two nominals. Crucially, this pronominal element èto is excluded from predicational bi-nominative sentences (Geist 2007), as illustrated in (16).

   my friend.NOM.SG.M that eye doctor.NOM.SG.M  
   ‘My friend is an eye doctor.’

Pereltsvaig (2001), Geist (2007) and Reeve (2010) point out that èto cannot be omitted in equative sentences either, as it provides a sort of “semantic glue” for the two co-referential NPs, which cannot combine directly.

(17) Mark Twain – *(èto) Samuel Clemens.  
   Mark Twain.NOM.SG.M that Samuel Clemens.NOM.SG.M  
   ‘Mark Twain is Samuel Clemens.’

A second syntactic difference between predicational and non-predicational sentences is the lack of a nominative vs. instrumental alternation on NP2 in non-predicational. In relation to this issue, Matushansky (2008) claims that the nominative case may have either a predicative or a sortal/classificatory meaning, as exemplified in (18a). In contrast to this example, which is ambiguous, (18b) and (18c) are not. Note that the non-predicative reading of poet is either expressed in the nominative case without a copula (e.g., (18a), (15a)) or with a copula (e.g., (18b)), the meaning being that Puškin is identified with an individual entity that has the property denoted by the noun poet. By contrast, the predicative reading of poet is either expressed in the nominative case without a copula (e.g., (18a), (16)) or in instrumental case with a copula (e.g., (18c)).
Concerning definitional copular sentences, it should be noted that the nominative vs. instrumental case alternation is not found in them, since both NP1 and NP2 of definitional generic sentences must be in the nominative case.

Interestingly, the same pattern is attested in equative sentences (Geist 2007). Recall the example in (17). In this type of sentence the nominative case cannot alternate with the instrumental either, even if the copula is overt, as illustrated in (19).

   Cicero.NOM.SG.M that was.SG.M Tully.NOM.SG.M
   ‘Cicero was Tully.’

   b. *Ciceron byl Tulliem.
   Cicero.NOM.SG.M was.SG.M Tully.INS.SG.M

This means that definitions look similar to equatives, but they differ from them as in equative sentences NP1 and NP2 refer to individual entities that are assumed to be coreferential, whereas this is not the case for definitional sentences. Instead, as we show in this paper, in the latter the two NPs refer to kinds, conceived as abstract sortal concepts (Mueller-Reichau 2011; Borik & Espinal 2015; in press), and the meaning conveyed is that there is identity/identification between the two kind-refering NPs.

To sum up, an NP2 in the instrumental is a characteristic of predicational sentences (Rothstein 1986; Pereltsvaig 2001; Geist 2007; Bailyn 2012; Bogatyreva 2014), and it is ruled out of definitional sentences.

An additional syntactic characteristic of definitional sentences, which makes them different from predicational ones, is that, generally, such sentences do not contain an overt copula.\textsuperscript{14} Accordingly, in the Russian linguistic tradition (Mel’čuk 2012: 86) they are called “nominative” (imennoe predloženie). In the present tense, the copula BE is not generally overt and is never obligatory, but it may be used for stylistic purposes (e.g., in philosophical statements, mathematical definitions and poetic or biblical sources). No matter whether the copula is overt or covert, NP2 is always in the nominative case, as illustrated in (20).\textsuperscript{15}

\textsuperscript{14} Copula omission is a phenomenon that exists in many languages. In some languages the copula can be omitted absolutely freely. In other languages, as is the case in Russian, it can be dropped only under specific grammatical conditions, such as in the present tense. Cantonese is an example of a language where the omission of the copula haih ‘to be’ is not limited to any particular grammatical context (Pustet 2003: 34). The omission of the present tense copula has also been described in languages such as Jamaican English Creole, Guyanais French Creole, Principense Portuguese Creole and African American Vernacular Language (Edwards 2006: 310). Copula omission in the present is also typical in early stages of the acquisition of English (Strohman 2013). In Classical languages, such as Latin, Ancient Greek and Sanskrit, copula-less sentences are said to express general truths (Mel’čuk 2012), and they are considered to be generic sentences.

\textsuperscript{15} An online search was carried out for the combination èto + overt copula est’ + noun in the Russian web corpus ruTenTen11 (SketchEngine, \url{http://www.sketchengine.eu}; Kilgarriff et al. 2004). This corpus contains 14,553,856,113 words. The output of the query with Corpus Query Language gave 1,661 hits (0.10 per million), as compared to 1,579,721 hits (86.40 per million) in a second query without est’. From these data we draw the conclusion that the overt copula est’ may be used in the present tense, although it is rather infrequent.
(20) a. Lingvistika èto est’ nauka. / *naukoj.
linguistics.NOM.SG.F that is science.NOM.SG.F science.INS.SG.F
b. Lingvistika èto nauka. / *naukoj.
linguistics.NOM.SG.F that science.NOM.SG.F science.INS.SG.F
c. Lingvistika est’ nauka. / *naukoj.
linguistics.NOM.SG.F is science.NOM.SG.F science.INS.SG.F
‘Linguistics is a science.’

Note that only (20a) shows the neuter demonstrative pronoun followed by a copula in the present tense.\textsuperscript{16} Furthermore, note that even though the present tense copula may optionally appear in definitional and equative sentences, it is obligatorily absent in predicational ones, as illustrated in (21).

(21) a. Mark Twain èto (est’) Samuel Clemens.
Mark Twain that is Samuel Clemens.NOM.SG.M
‘Mark Twain is Samuel Clemens.’
b. Mark Twain *est’ pisatel’.
Mark Twain is writer.NOM.SG.M
‘Mark Twain is a writer.’

In the past or future tense, the copula be is obligatory, as illustrated in the definitions in (22a), which is the past of (22b), and in (23a), which would turn into (23b) in the present.

(22) a. Dront – èto byla ptica.
dodo.NOM.SG.M that was.SG.F bird.NOM.SG.F
‘The/a dodo was a bird.’
b. Dront – èto ptica.
dodo.NOM.SG.M that bird.NOM.SG.F
‘The/a dodo is a bird.’

(23) a. Hyperloop – èto budet transport buduščego.
Hyperloop that will.be transport.NOM.SG.M future.GEN.SG.N
‘Hyperloop will be the transport of the future’
b. Hyperloop – èto transport buduščego.
Hyperloop that transport.NOM.SG.M future.GEN.SG.N
‘Hyperloop is the transport of the future.’

Example (22a) in a past tense form further illustrates a life-time effect, since it implies that representatives of the kind dodo do not exist anymore. In other words, the meaning of (22a) is that nowadays there are no dodos, but the kind dodo is still presupposed to exist. In contrast to (22a), example (24a), where èto co-occurs with a past tense copula followed by an NP2 in instrumental case, is ungrammatical. Example (24b) is also ungrammatical because NP2 Number and Gender agreement with the copula is required in definitional sentences. See also below, section 3.3.2.

\textsuperscript{16} Kondrashova (1996) points out that this copula is a vestigial present-tense support, as historically Russian had a full present tense morphological paradigm. It is important to notice that, unlike what happens in other Slavic languages (e.g., Polish, Czech, Ukrainian), the overt present tense copula in Russian never alters the case of NP2, which cannot be instrumental.
Finally, it should be noted that, beyond the copula be, definitional sentences also allow – next to the pronoun èto – a non-copular verb (e.g., značit’ ‘to mean’, označat’ ‘to refer’), as illustrated in (25).

\[(25)\]
\[
a. \quad \textit{Amor} – èto značit ljubov'.
\[
\text{amor} \quad \text{this means love}
\]
\[
\text{‘Amor means love.’}
\]
\[
b. \quad \textit{Ursus} – èto označaet medved'.
\[
\text{ursus} \quad \text{this refers.to bear}
\]
\[
\text{‘Ursus refers to (the kind) bear.’}
\]

Despite this possibility, in this article we are looking at the properties of definitional sentences of nominal concepts with no overt copula, like those exemplified in (1). We posit that in definitional sentences the copula is always structurally present but it may be covert. There are several pieces of evidence for this. Firstly, the overt copula may appear in some present tense sentences in Russian (as shown in (20a, c)). Secondly, the byt’ ‘to be’ copular verb is obligatory both in the past and in the future (as illustrated in (22a) and (23a)). Thirdly, the full present tense paradigm of the copular verb byt’ existed in Old Slavonic and Old Russian (and still exists in other Slavic languages) (Kondrashova 1996). For all these reasons we postulate that the structure of present tense definitional sentences in Russian contains a null be.¹⁸

To sum up, in this section we have shown that Russian definitional sentences are non-predicational. Unlike predicational sentences, they have a pronominal element èto in between NP1 and NP2; they do not manifest the nominative vs. instrumental alternation of the postcopular NP in the presence of an overt copula; and they may admit an overt present tense copula. Considering the above-mentioned characteristics, it can be concluded that Russian definitional sentences pattern with equatives, which characteristically are non-predicational copular sentences. This is explicable if we assume that, unlike NPs in equative sentences, which show co-reference between object entities, NPs in definitional sentences show co-reference between kind entities, through either identity or identification.

### 3 The structure and meaning of Russian definitional copular sentences

#### 3.1 The structure of definitions

As mentioned above, definitions consist of two parts, the definiendum and the definiens, a division that represents a special way of topic-comment structuring that is pervasive in human communication (Krifka 2013a).

As already mentioned in (3), we postulate the following structure for such definitions:

\[(26)\]
\[
[\text{TopP} \text{[NP} \text{]} … [\text{PredP} \text{[èto]} [\text{Pred} \text{[BE} \text{[NP} \text{]} \text{]]}]]
\]

---

¹⁷ As pointed out by an anonymous reviewer, different restrictions may apply to these different verbs. However, an analysis of these restrictions is beyond the scope of this paper.

¹⁸ See Kondrashova (1996) and Bogatyreva (2014) for previous studies that postulate a null copula be synchronically.
The definiendum (NP1) is the term whose meaning is being provided by the definiens. In Section 3.2 we argue that it corresponds to an aboutness topic, similar to the logical subject of categorical judgments. On the other hand, the definiens (the PredP projection that is merged within a TP) delivers information about the definiendum. In Section 3.3 we claim that the definiens (èto ë BE NP2) is a copular sentence that is structurally equivalent to an identificational sentence (see (11)). Unlike what has been postulated in the literature for specificational sentences (Heggie 1988; Moro 1997; Partee 2000; 2010; Alsina & Vigo 2014; and others), we argue that postcopular NP2 is not an inverted syntactic subject of the copular verb but rather a complement that shows non-canonical agreement (Béjar & Kahnemuyipour 2017). Èto is a presentational pronoun that connects the two NPs by means of a two-place relation of type $<e^k <e^a,t>$ . Finally, in Section 3.4 we defend the notion that the copula BE in definitions of nominal concepts encodes an identity function (i.e., it returns the same value that is used as its argument, the postcopular NP2).

### 3.2 The definiendum: NP1

In definitions NP1 denotes an abstract sortal concept; it is the name of a kind. We hold that the denotation of NP1 is similar to that of generic definites (Carlson 1977/1980), also known as singular generics (Chierchia 1998) and definite kinds (Borik & Espinal 2015; in press), and it corresponds to an intensional atomic integral entity (type $<e^k>$ ). It should be noted that the notion of definite kind is about language (how D-generic-ity and reference to kinds of things is expressed in natural languages), and is coherent with Krifka’s (2013: 375) claim that “definitional generics restrict the language used to describe the world”.

The kind denotation of NP1, similar to definite kinds, is evidenced by the fact that while definite kinds are able to appear in argument positions of kind-level predicates, as in (27a), these same definite kinds can be easily rephrased in the form of a definition, as illustrated in (27b), where iPod is the name of a kind that refers to a kind conceived as an integral entity, without any commitment to instantiations or realizations of the kind.

\begin{align*}
(27) & & \text{a. } \text{Steve Jobs} & \text{izobrёl iPod.} \\
& & \text{Steve Jobs.NOM.SG.M} & \text{invented iPod.ACC.SG.M} \\
& & \text{‘Steve Jobs invented the iPod.’} \\
& & \text{b. } \text{iPod – èto gadžet, koroiy izobrёl } \text{Steve Jobs.} \\
& & \text{iPod.NOM.SG.M} & \text{that gadget.NOM.SG.M which invented S. Jobs.NOM.SG.M} \\
& & \text{‘The iPod is a/the gadget that Steve Jobs invented.’}
\end{align*}

Similarly, NP1 in (28) refers to a kind that is identified with another kind, the denotation of NP2. Identity between kinds is found cross-linguistically and is a common process in L2 acquisition, as illustrated by the two examples in (29).

\begin{align*}
(28) & & \text{Sivuč – èto morskoj lev.} \\
& & \text{sivuč.NOM.SG.M} & \text{that sea lion NOM.SG.M} \\
& & \text{‘The/a sivuč is the/a sea lion.’}
\end{align*}

\begin{align*}
(29) & & \text{a. } \text{Catalan} \\
& & \text{El beç és el bedoll.} \\
& & \text{the beç is the birch.tree} \\
& & \text{‘The/a beç is the/a birch tree.’}
\end{align*}

\footnote{Names of kinds have been claimed to be a default form in the “mental catalogue” (Leslie 2007; 2008).}
Parallel examples are presented in (30), repeated from (15a), and in (31), repeated from (22b). In (30) the NP1 okulist refers to a kind entity, whose identity is provided by a second kind entity, the NP2 glaznoj vrač, and in (31) dront refers to a kind entity, which is identified with the kind ptica.

(30) Okulist – èto glaznoj vrač.
ocular nominative singular masculine
‘The/an oculist is an eye doctor.’

(31) Dront – èto ptica.
dodo nominative singular masculine
‘The/a dodo is a bird.’

Interestingly, it is also possible to have a generic plural term as NP1. Compare (32a, b). Note that the definiens part of both sentences remains unchanged, no matter whether the definiendum is singular or plural.

whale nominative singular masculine
‘The whale is a kind of mammal.’

b. Kity – èto vid mlekopitajuščix.
whale nominative plural masculine
‘Whales are a kind of mammal.’

We hold that unlike the kind expression kit ‘the whale’, which refers to a kind conceived intensionally as an integral entity, the generic plural kity ‘whales’ refers to a kind conceived extensionally as a set of individuals that have the property of being whale (Borik & Espinal 2015: 183). Thus, our claim is that the kind denotation of NP1 is identified in both examples with the kind mammal, here introduced by a special lexical item, vid ‘kind’.

Beyond these semantic properties, NP1 always gets a default nominative case. Pereltsvaig (2001) posits that Russian nominative case can be found in two types of nominals, those whose nominative is licensed by a certain syntactic configuration, and those that need not be marked for case at all. We suggest that the NP1 found in definitional copular sentences is a candidate for the second type, given that NP1 is structurally outside the copular sentence and cannot obtain nominative case from Tense. Syntactically, we postulate that NP1 is generated sentence initially, at a left-peripheral sentential domain, that is in TopP (Rizzi 1997; and others). The nominative singular marking of NP1 appears to be only part of a morphophonological cluster, a default choice in the absence of a trigger of syntactic features.20

Concerning the information structure conveyed by definitions, NP1 is to be considered an aboutness topic (Reinhart 1981; Krifka 2007; Roberts 2011) that the statement delivers information about. In other words, definitions are about the definiendum, as they supply information about the meaning of the term to be defined (Krifka 2013a), and NP1 refers to an “entity that a speaker identifies, about which then information, the comment, is given” (Krifka 2007: 40).

20 See Progovac et al. (2006) for Polish.
This proposal makes definitions on a par with categorical judgments (Kuroda 1972; Ladusaw 1994).21 The precopular NP1 looks like a logical subject (i.e., a topic) of a categorical judgment, while the rest of the sentence (the PredP, part of a TP) corresponds to the logical predicate. Like NP1s in categorical judgments, NP1s in definitional sentences are topics, which in the latter case must be interpreted generically. Moreover, both NP1s in definitional sentences and NP1s in categorical judgments have a strong reading with a presuppositional interpretation, more exactly a presupposition of existence.22 Syntactically, definitional sentences differ from other categorical judgments in that the NP1, being merged in SpecTopP, must be nominative, while the NP1 of the rest of categorical judgments may show a variety of cases after internal merge to SpecTopP.23

To sum up this section, semantically speaking the definiendum (i.e., NP1) is interpreted generically and refers to a kind (conceived either intensionally or extensionally). Furthermore, it is interpreted as an aboutness topic similar to the logical subject of categorical judgments. This analysis of NP1 supports the claim that in a sentence such as (30) an identity is established between two kind expressions (i.e., oculist and eye doctor), and the sentence can be translated into English by saying ‘As for the kind named with the noun okulist, it is identical to/identified with the kind named with the noun glaznoj vrač’. In (31) the kind dodo is identified with the more inclusive bird kind, and can be translated into English as ‘As for the kind named by the noun dront, it is identified with the kind named by the noun ptica’. In any case, NP1 always has a default nominative case form.

3.3 The definiens: èto NP2

3.3.1 An identificational copular sentence

In this section we focus on the clause that follows and defines NP1 in the structure in (26). First, note that the definiens consists, most commonly, of an overt demonstrative pronoun èto followed by an NP2 also in the nominative case. Second, the structure of the definiens is similar to the one postulated for identificational copular sentences.24 Consider in this respect the similarities between (33a, b).

21 The categorical/thetic distinction may be encoded in Russian by means of constituent order variation. For intransitive predicates, VS-order is generally associated with theticity (Sasse 1987; King 1995; Bailyn 2012). Sentences with transitive predicates and SVO-order are “functionally ambiguous” (Bailyn 2012: 260). This ambiguity may be resolved by prosodic means: Maslova (1995: 180) posits that Russian thetic sentences are normally subject-accented. By contrast, subjects functioning as topics have been claimed to lack prosodic prominence (Jasinskaja 2014), which is exactly the situation of subjects of definitional generics.

22 Note that the subject of a categorical judgment is associated with a speaker’s presupposition of existence, which means that, prototypically, the subject has a strong reading. See (i).

(i) The hippopotamus lives in Africa.  

(i) Victor,ACC,Sg,M I respect  

‘I respect Victor.’

23 According to Higgins (1973), English identificational copular sentences are non-predicational, and consist of a deictic this/that subject followed by a postcopular NP expression, which is a proper name or a definite expression, as in (i).

(i) That’s Mark. = (11)
Saranča – èto kuznečik.  
\textit{definitional}
\begin{tabular}{l}
locust.NOM.SG.F that grasshopper.NOM.SG.M
\end{tabular}
‘As for the locust, it is the/a grasshopper’ or ‘The locust is the/a grasshopper.’

b. Èto kuznečik.  
\textit{identificational}
\begin{tabular}{l}
that grasshopper.NOM.SG.M
\end{tabular}
‘That is the/a grasshopper.’

And, third, a copular verb may be present: in formal statements a copula in present tense, as illustrated in (20a, c); elsewhere, in forms other than present, as illustrated in (22a) and (23a).

We next take a closer look at the components of this identificational-like copular sentence. Let us start with NP2, which provides the conceptual content of the \textit{definiens}.

3.3.2 NP2

Semantically speaking, the NP2 of the \textit{definiens} has kind reference (see Padučeva 1985: 128). It is associated with the kind reference introduced by NP1 by a semantic function of identity/identification between kinds. Identity/identification between kinds makes the following sequences, which obey a transitive relation, possible.

(34)  
fox.NOM.SG.F that mammal.NOM.SG.N

b. Mlekopitaļuščee – èto životnoe.  
mammal.NOM.SG.N that animal.NOM.SG.N
‘A fox is a mammal. A mammal is an animal.’

Concerning the information structure conveyed by definitions, NP2 is part of the comment (the psychological predicate; von der Gabelentz 1869), the information given to define NP1 (the psychological subject). Accordingly, if NP1 is the topic to be defined, NP2 is part of the comment constituent stored in the common ground content for the term to be defined.

Syntactically, the status of NP2 must be considered in the light of the debate on copular sentences, because it is unclear whether it should be considered the subject or the complement of the copular clause. The syntactic facts to be examined are the following. First, NP2 is a nominal expression in the nominative case, although no overt Case assigner necessarily appears in the clause. We postulate that this nominative case is assigned to the NP with a non-defective phi-structure, which is precisely NP2, by an Agree relation with the head of T(ense)P(hrase). See below.

A second important observation about NP2 is that it triggers Number and Gender agreement with the copula, when it is overt. This is illustrated in (35).

(35)  
dodo.NOM.SG.M that was.SG.F bird.NOM.SG.F
‘The/a dodo was a bird.

b. Dinosavry – èto byl vid reptilij.  
dinosaur.NOM.PL.M that was.SG.M kind.NOM.SG.M reptile.GEN.PL.F
‘Dinosaurs were a kind of reptile.’

Interestingly, in identificational sentences the copula, if it is overt, must also agree with the postcopular NP, but not with èto, which is defective for phi-features, since it is basically specified only for neuter gender.
(36) Someone knocked on the door. It was Masha.

'Kto-to postučal v dver'. Èto byla Maša.

Such agreement with the NP in postcopular position is not uncommon cross-linguistically in inflectional languages. It is found not only in Slavic, but also in Romance and Germanic languages.

(37) **Catalan**
   a. El problema és el Joan.
      the problem is the Joan
      'The problem is Joan.'
   b. El problema són els estudients.
      the problem are the.PL.M students
      'The problem is the students.'

(38) **French**
   a. C’est mon problème.
      this.SG.M.is my.SG.M problem.SG.M
      'This is my problem.'
   b. Ce sont mes problèmes.
      this.SG.M are my.PL problems.PL.M
      'These are my problems.'

(39) **German**
   a. Das ist meine Schwester.
      this.SG.N is my.SG.F sister.SG.F
      'This is my sister.'
   b. Das sind meine Freunde.
      this.SG.N are my.PL friends.PL.M
      'These are my friends.'

However, this possibility does not exist in English, where the copula must agree with the nominal in precopular position.

(40) a. This is my friend.
   b. *This is my friends.
   c. *This are my friends.
   d. These are my friends.

Hence, these examples illustrate a contrast between canonical NP1 agreement (the situation in English) and non-canonical (or inverse) NP2 agreement (the situation in Russian, Catalan, French and German) in binomial copular sentences. This phenomenon, previously discussed by Moro (1997) for Italian, Heggie (1988) for French and English, Den Dikken (1998) and Heycock (2012) for Germanic languages, Costa (2004) for Portuguese and Alsina & Vigo (2014) for Catalan, among others, has received two main lines of analyses, summarized in (41) (from Béjar & Kahnemuyipour 2017: 465).

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26 Recall that we assume the NP1 of definitional sentences to be a syntactic topic generated in a left-dislocation position, and to be distinct from the NP1 of copular sentences.
(41)  a. NP1 has moved over NP2 to a position in the left-periphery, as is shown by (42a) below, but NP2 is the actual structural subject and so NP2 agreement is in fact canonical agreement (Heggie 1988).
    b. NP1 has moved over NP2 into the structural subject position, as is shown by (42b). NP2 is not the structural subject, but at the point in the derivation when agreement occurs it is the closest available NP (Mikkelsen 2005; Heycock 2012, building on Moro 1997).

(42)  a. \[\text{CP} \text{NP1 } [\text{TP NP2 T be } \text{NP2 NP1}]\]
    b. \[\text{CP } [\text{TP NP1 T be NP2 NP1}]\]

On the other hand, Alsina & Vigo (2014) explain the difference between English and Catalan as reflecting a parametric choice with respect to the possibility of subject-complement inversion around the copula. In copular inversion languages, NP1 and NP2 are regarded by these authors as co-subjects and the NP that triggers agreement is the one that ranks higher in the Person-Number Hierarchy, that is, the one that is more prominent in terms of features, in spite of occupying a post-copular position. By contrast, in non-copular inversion languages, like English, the agreeing NP will always be the pre-copular one, as illustrated in (40d).

A parallel proposal is developed by Béjar & Kahnemuyipour (2017: 465), who postulate an alternative account of NP2 agreement that dissociates it from the syntax of inversion: “NP2 agreement arises when the phi-feature structure of NP1 is defective relative to the probe, with specification contexts being just a subset of the relevant ones”.27

This proposal may be extended to Russian definitional copular sentences. In this case êto corresponds to the so-called NP1 of copular sentences, generated by external merge in SpecPredP, while NP2 is the complement of Pred.

(43)
\[
\text{PredP} \\
\text{êto} \quad \text{Pred'} \\
\text{Pred} \quad \text{BE} \quad \text{NP2}
\]

Given that êto is a morphosyntactically neuter invariant pronoun, we assume that it is defective and has a minimal phi-structure [iGender:Neuter] that allows its occurrence in an argument position.28 Due to its morphosyntactic defectiveness (Cardinaletti & Starke 1999; Déchaîne & Wiltschko 2002) êto can be considered a weak pronoun and, concerning

27 It should be noted that specificational copular sentences are those that seem to require NP2 agreement. Heggie (1988) and Moro (1997) argue that inversion of a predicate takes place in copular clauses in English examples as in (ia,b).

(i)  a. Jenny is the teacher.
    b. The teacher is Jenny.  \hspace{1cm} \text{specificational}

In both these cases, these authors claim that the teacher is the predicate and has raised to its surface position, inverting over the subject.

28 Following Béjar & Kahnemuyipour (2017) this minimal phi-structure would probably include also [n] (for nominal) and [d] (for deictic).
Agree relations, a defective goal. However, èto is distinct from other defective goals postulated in the theory of grammar (i.e., clitics; Roberts 2010) in that (i) it is not a subject clitic and (ii) its features are not a proper subset of the features of its potential host (i.e., Tense). Therefore, èto does not incorporate into this potential host, as proposed for cliticization.

On the other hand, given that head movement (i.e., incorporation) takes place whenever possible, without reference to EPP features, and that the T of definitional sentences is unvalued for [uEPP], we postulate that T attracts the subject weak pronoun to SpecTP. However, two caveats are in order here. First, since Russian is a (partial) null subject language (Biberauer et al. 2010; Bizzarri 2015), this movement is not obligatory. Second, since Russian èto is defective, the mechanism of checking the EPP feature of T must be considered apart from the operation of checking nominative case. This is why case is assigned to the only NP that remains in the copular structure and is specified for phi-features (Number and Gender), which is NP2. The output of this agreement operation is that NP2, but not èto, is specified for nominative case. To sum up, although èto starts in SpecPredP (43), it moves to SpecTP to check the [uEPP] feature of T; by contrast, T values [uCase: ] as nominative on NP2, and the copula is valued as present by Agree with [iT:Pres] on T. See the structure in (44b) for a sentence such as (44a).

(44) a. Lingvistika èto est’ nauka. = (20a)
    linguistics.NOM.SG.F that is science.NOM.SG.F
    ’Linguistics is a science.

b. TopicP
   NP1
   Topic  TP
     èto
     [iG:N] [EPP]
     T
     PredP
       BE  
       [uT: ]
       T  [uφ] [uEPP] [uCase:Nom]  [iT:Pres]  èto
       NP2  [iφ] [uCase: ]

Let us now consider (20b, c), repeated here as (45a, b).

(45) a. Lingvistika èto nauka.
    linguistics.NOM.SG.F that science.NOM.SG.F
b. Lingvistika est’ nauka.

Linguistics.NOM.SG.F is science.NOM.SG.F

‘Linguistics is a science.’

The former shows a covert copula and the latter a covert pronoun. We postulate for them a syntactic structure similar to (44b), since these examples share with (44a) the fact that they are definitional sentences with a present tense reading. The only difference is that at Spell-out either the present copula est’ or the pronoun is not instantiated, the latter being expected in a language that allows null subjects. Consider the structures in (46a, b), where angle brackets indicate lack of phonological realization.

(46) a. TopicP
      np1
      topic tp
      e to [iG.N] [EPP]
      T [uφ] [uEPP] [uCase:Nom] [iT:Pres] est'
      predp
      <BE> np2
      [iφ] [uCase: ]

b. TopicP
      np1
      topic tp
      T predp
      BE [uT:] [uφ] [uEPP] [uCase:Nom] [iT:Pres] est'
      <BE> np2
      [iφ] [uCase: ]

In this section we have provided a reply to the following questions:

- Why does ēto move? To check the EPP feature of T.
- Where does ēto move? To SpecTP.29
- Why does Case-Number-Gender agreement take place with NP2, rather than with ēto? Because ēto is a defective goal and NP2 is the constituent that ranks higher in terms of phi-features. This implies that in this construction the checking of EPP and the checking of nominative case do not go hand in hand. This is supported by the additional fact that, Russian being a null subject language, ēto may be silent.

Structure (44b) shows checking of all features (redundant system, full copying). Structure (46a) also shows checking of all features, but the copula is not attracted to T (non-null subject system, partial copying). Finally, structure (46b) shows checking of all features, but ēto is not attracted to SpecTP (null-subject system, partial copying). In this way we can state that examples (44a) and (45a, b) make different instantiations of the Agree relation manifest.

We conclude that the fact that in definitional sentences the postcopular NP2, but not ēto, triggers non-canonical agreement with the copula is explained by its non-defective status, that is, its higher prominence in terms of phi-features: it is specified for Number and Gender, which makes it the optimal candidate for checking the [uCase:Nom] of T.

Let us next consider additional properties of ēto.

3.3.3 Ēto

According to Padučeva (1985), ēto is one of the mysteries for both lexicographers and syntacticians of the Russian language. It is an invariable pronoun, identical or homophonous with the so-called neuter nominative form of the demonstrative pronoun (ētot NOM.SG.M, ēto NOM.SG.NEUT, ēta NOM.SG.F). Ėto can refer deictically to some external auditory or visual stimulus, as illustrated in the example (33b) and also in (47) (from Reeve 2010: 199, ex. (83a)).

(47) (There was a knock on the dinner table.)
Ēto Nikanor uronil ložku na kleënku.
that Nikanor.NOM.SG.M dropped spoon on oilcloth
‘That was Nikanor who dropped a spoon on the oilcloth.’

Recall that in the case of definitional generic sentences we have argued that NP1 is an aboutness topic that introduces kind reference. In accordance with this claim, one could suggest that ēto is a resumptive-like pronoun for the left-peripheral NP1 (see the analysis of ēto for equatives in Geist 2007). However, there are reasons to think that this is not the case.

Two types of left-dislocation have been distinguished in colloquial Russian (Pereltsvaig 2001; Reeve 2010): left-dislocation proper (48a) and pronoun-doubling (48b). In both these structures the resumptive is a personal pronoun, which agrees with the topicalized element in Gender and Number, and also in Case in pronoun-doubling constructions.

Victor.NOM.SG.M I him.ACC.SG.M respect
‘Victor, I respect him.’

29 Recall that ēto does not move to T because, in spite of being defective, the feature specification of the pronoun and the potential incorporation host (i.e., T) are different.
b. Victora, ja ego uvažaju.
Victor.ACC.SG.M I him.ACC.SG.M respect
‘As for Victor, I respect him.’

By contrast, definitional sentences (49a) show no grammatical Gender or Number agreement between èto and NP1, because èto is a neuter pronoun. Note that (49b), which shows overt Case-Number-Gender agreement with the topicalized constituent, is ungrammatical.

(49) a. Lev – èto dikoe životnoe’.
lion.NOM.SG.M that wild animal.NOM.SG.N
‘The/a lion is a wild animal.’

lion.NOM.SG.M that.NOM.SG.M wild animal.NOM.SG.N

We therefore conclude that, in spite of appearances, èto is not a resumptive pronoun, since it does not agree with the left-peripheral topic. Rather, the use of the neuter pronoun èto in definitional sentences reminds us of the status of bare demonstratives in subject position of identificational sentences (Moltmann 2013). Semantically, èto is a presentational pronoun, for it introduces a presentational function: the neuter pronoun introduces the reference to an entity but is not by itself referential. That is, it introduces the identity of the entity referred to by the postcopular NP2, which is related to the entity referred to by the topic NP1. This means that this pronoun has a specific semantic function, a function that relates the kind entity denoted by NP2 to a unique kind entity in the context (our NP1).

The non-referential status of presentational èto in definitional generic sentences becomes evident if we consider both its presentational denotation as well as the fact that they can be said to express a relation between a question (‘What does X mean/refer to?’) and an answer (‘Y’) (see Den Dikken et al. 2000; Schlenker 2003, and our discussion of (8) above). Note that Padučeva (1985: 178) introduces this use of èto in bi-nominative clauses in the following terms: an antecedent introduces an object, relating it to a certain concept (in Frege’s sense). The purpose of èto is to ascribe a new concept, introduced by

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30 Note that the absence of agreement between a resumptive and the dislocated element it resumes is not always obligatory, as observed in French and English in identificational sentences, such as those exemplified in (i) and (ii).

(i) Sa passion, c’est les femmes.
his passion.SG.F it.SG.M.is the women.PL.F
‘His passion is women.’

(ii) The tallest girl in the class, it/that is Molly.

Following Diessel (1999) and Rutkowski (2006), we think that such demonstratives do not exactly resume NP1. This is so because they are morphosyntactically neuter and semantically do not refer to the entity introduced by NP1.

31 According to Moltmann’s (2013: 44) analysis of identificational sentences “presentational pronouns involve reference to a perceived feature or trope (a particularized property) (…). An identificational sentence then does not state the identity of the referents of two referential terms, but rather the identity of the entity introduced by the postcopular NP with the bearer of the trope that the presentational pronoun makes reference to”. Some examples are given in (i):

(i) a. That’s Mark. = (11)
b. This is a wonderful movie.

32 But note that according to Moltmann (2013: 59), the denotation of a presentational pronoun is a function that maps worlds to the sum of entities that act as the objects of direct perception. By contrast, the denotation of the presentational pronoun èto is a two-place relation that takes as input the meaning of the kind-referring expression denoted by NP2, and gives as output a one-place relation that combines with the meaning of NP1 to yield a generic sentence.
the second nominal component of the èto-clause, and to identify it with the old one.\textsuperscript{33} And this is the sense of identification. (See Section 1.1 for the relation between kinds and concepts.)

Besides the analysis provided in the previous section, the syntactic status of èto in copular sentences is debatable. Some researchers (Citko 2008, for Polish to; Geist 2007; Babaitseva 2014, for Russian) consider it to be a pronominal copula. Now, as made explicit in (44a), èto may co-occur with the verbal copula. In such cases Citko (2008) suggests that what is involved is a double copula (pronominal + verbal) construction. However, this analysis does not seem to bear up in any attempt to account for the current status of definitional sentences in Russian, as we argue next.

There is cross-linguistic evidence that a pronoun can in fact be reanalyzed as a copula. This diachronic change has been described for personal pronouns in Palestinian Arabic and Hebrew (\textit{hu} M.SG ‘he/is’ and \textit{hi} F.SG ‘she/is’; Rutkowski 2006: 151), and a demonstrative in Mandarin (\textit{shì} ‘this/is’; Li & Thompson 1977). Note that in Mandarin it is possible to combine the pronoun with the demonstrative copula, as illustrated in (50) (from Peyraube & Wiebusch 1994: 398, van Gelderen 2015: 289). In (50a) \textit{shì} functions both as a demonstrative and as a copula, while in (50b) the demonstrative function disappears but the copula function remains and it indicates identity.\textsuperscript{34}

\begin{equation}
\begin{aligned}
\text{(50) } & \text{a. } \text{Old Mandarin} \\
& \text{Shì shì lie gui.} \\
& \text{‘This is a violent ghost.’}
\end{aligned}
\end{equation}

\begin{equation}
\begin{aligned}
\text{b. } \text{Modern Mandarin} \\
& \text{Zhe shì lie gui.} \\
& \text{‘This is the violent ghost.’}
\end{aligned}
\end{equation}

However, the dual copula hypothesis does not seem to be justified for Russian (and Polish).\textsuperscript{35} One piece of evidence for the non-copular status of èto is the ungrammaticality of (51).

\begin{equation}
(51) \ *\text{Èto èto vrač.} \\
\text{that that doctor (Intended meaning: ‘This is a doctor.’)}
\end{equation}

Further evidence is provided by examples such as (53).

\begin{equation}
(52) \ *\text{On èto vrač.} \\
\text{he that doctor (Intended meaning: ‘He is a doctor.’)}
\end{equation}

\textsuperscript{33} See also Grenoble (1998) who points out that, as a demonstrative, èto introduces an identifying function.

\textsuperscript{34} See van Gelderen (2015) for the hypothesis that a copula cycle is to be postulated in the grammar of natural languages in order to explain the fact that demonstratives and intransitive verbs are reanalyzed as copulas at one stage of the copula cycle, having the possibility to disappear at the next stage. She formulates the first change as an instance of Specifier to Head movement within PredP, which results in a copula with a location or identity flavour. In particular, Mandarin Chinese illustrates the reanalysis of the demonstrative \textit{shì} as a copula of identity. See also van Gelderen (2004; 2011) and Lohndal (2009).

\textsuperscript{35} Consider the following Polish example, from Rutkowski (2006: 169)

\begin{equation}
(\text{i) } \text{‘To to jest mój najlepszy przyjaciel.}\text{ this this is my best friend} \\
\text{‘This is my best friend.’}
\end{equation}
Note that this example is ungrammatical with a predicational reading. However, if èto were a pronominal copula, it should be well-formed. By contrast, this example is grammatical with an identificational reading, which is analyzed by postulating on ‘he’ as a topic, èto as the subject of the copular sentence and vrač as the complement. When this sentence turns into the past (or future), the claim that èto is not a pronominal copula is borne out.

(53) On – èto byl vrač.
     he    that was doctor
     ‘As for him, he was the doctor.’

Therefore, we conclude that èto is not a pronominal copula but rather a pronominal constituent necessary to build an identificational sentence or an identity statement in the first place (the definiens), and a semantic connection between NP1 and NP2 in the second place.

Crucially, as we have shown, èto is present in identifications and equatives (Pereltsvaig 2001; Geist 2007), but not in predicational sentences. In this regard, Padučeva (1985: 177) claims that sentences with èto as the first component do not allow a predicative NP as their second component, since they require the second component to be referential, either individual referential (54a) or kind referential (33b).

(54) a. Èto pовар.
     that cook
     ‘That’s the cook.’

b. *Èto pовар po professii.  
     that cook   according.to profession

In definitional sentences the use of èto has been regarded in the literature as either obligatory (which is not always the case, considering the examples in (20)) or strongly preferred (Kondrashova 1996: 38). It is crucial to note that, in contrast to (22a), repeated here as (55a), when èto is absent and the past tense copula is overt, NP2 takes the instrumental case. In that case, as shown in (55b), the sentence becomes predicational and loses its definitional interpretation, which once again supports the conclusion that èto in definitional sentences is not a pronominal copula.36

36 Similarly, in Polish, where the overt verbal copula may be used in the present tense, the case of NP2 seems to depend on the presence or absence of the pronominal element to. Thus, NP2 takes the nominative case if to is present, and instrumental if it is absent. See (i) (from Swan 1993: 154–156).

(i) a. Wróbel to jest ptak.
     sparrow   that (is) bird
     ‘A sparrow is a bird.’

b. Wróbel jest ptakiem.
     sparrow   is bird
     ‘A sparrow is a bird’.

     sparrow   is bird

We would like to thank Karolina Zuchewicz for her judgments on these examples.

As Clancy (2010) suggests, the pronominal element to followed by the copula is characteristic of sentences that have a defining and categorizing nature (ia), where the use of a generic noun as NP2 in the nominative case requires the BE construction with to. By contrast, sentences with a copula followed by an NP2 in the instrumental case ascribe a property to NP1 in the nominative case (ib).
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To sum up, in this section we have argued that (i) the *definiens* has the structure characteristic of an identificational sentence; (ii) this identificational structure consists of a neuter pronoun *étot* that introduces a presentational function; and (iii) *étot* has a pronominal non-copular status.

What remains to be addressed is the question of which constituent is responsible for introducing the postulated identity/identification function between kinds, and how the meaning of this constituent interacts with the presentational function introduced by *étot*. The answer is given in the next section.

### 3.4 Back to the whole structure of definitional sentences

Let us consider once again the structure in (3), repeated here as (56).

(56) \[
[\text{TopP} \ [\text{NP}_1] \ldots [\text{PredP} \ [\hat{\text{étot}}] \ [\text{BE} \ [\text{NP}_2]]]]
\]

So far we have argued that NP1 is a Topic (specifying what a statement is about), *étot* is a presentational pronoun, and NP2 is the constituent that provides conceptual content to define NP1 and the reference with which NP1 is associated. Recall also that the examples in (1), repeated here as (57), provide two possible readings for definitional generic sentences: the first one, (57a), that can be paraphrased as ‘As for the kind named by the noun *gippopotam*, it is identified with the kind named by the noun *begemot*,’ and the second one, (57b), that can be paraphrased as ‘As for the kind named by the noun *gippopotam*, it is identified with the kind named by the nominal expression *tolstokožee mlekopitajuščee živuščee v Afrike*’.

(57) a. Gippopotam – *etot* begemot.
   *gippopotam.NOM.SG.M* that *hippopotamus.NOM.SG.M*
   ‘The/a gippopotam is a hippopotamus.’

b. Gippopotam – *éto* (tolstokožee) mlekopitajuščee
   *gippopotam.NOM.SG.M* that thicken-skinned mammal.NOM.SG.N
   living in Africa
   ‘The/a gippopotam is a (thick-skinned) mammal (living in Africa).’

In this section we claim that the copula of definitional sentences is associated with a type-neutral identity function for \( \langle e^k \rangle \) that returns the same value that is used as its argument (i.e., \( f(x) = x \)). Other than that, the copula has no semantic effect. This identity function is responsible for the identity/identification characteristic of definitional sentences. Accordingly, the copula maps any kind entity (type \( \langle e^k \rangle \) ) into itself, \( \lambda y. y \), while *étot* denotes a two-place relation (type \( \langle e^k \langle e^k, t \rangle \rangle \)), since it takes as input the meaning of NP2 and gives as output a one-place relation that combines with the meaning of NP1 to yield a generic sentence. This is represented in (58) for sentence (57a). Sentence (57b) would have a parallel representation, since *tolstokožee mlekopitajuščee živuščee v Afrike* stands for a modified kind.
In this structure, NP1 is the topic that introduces a kind entity, to which a new concept, a second kind entity (NP2) is ascribed. As argued in this section, this identity/identification between NP1 and NP2 takes place in two steps. First, \( \textit{be} \) introduces a type-neutral identity function that maps kind entities to themselves. Second, \( \textit{èto} \) takes as input the kind entity output of \( \textit{be} \) and gives as output a function that looks for a second kind entity with which it is identified. This is how we predict the compositional meaning of definitional generic sentences in Russian.

4 Conclusions

In this article we have discussed the structure and meaning of Russian definitional generic sentences that define nominal concepts. We have shown that answers to the question ‘What is X?’ or ‘What does X mean/refer to?’ have the canonical form \( \text{NP1 \ èto \ NP2} \), which express both D-genericity and I-genericity in the sense of Krifka et al. (1995).

We have argued that definitional sentences are copular sentences, and are non-predicational, showing similarities with equative, identificational and specificational sentences.

Syntactically, such sentences have a two-part structure, which consists of an NP1, the external topic (\textit{definiendum}), and an \( \textit{èto [be]} \) NP2 identificational copular clause (\textit{definiens}). NP1 has been postulated to be merged in SpecTopP with a default nominative case. By contrast, NP2 – merged with a non-defective phi-structure in complement position of Pred – has been argued to be responsible for non-canonical agreement with the copula, and for checking the \([u\text{Case}:\text{Nom}]\) of T. The defective neuter pronoun \( \textit{èto} \) has been argued to be different from resumptive-like pronouns and has been postulated to merge in SpecPredP. From this position it can be attracted to SpecTP in order to check the EPP feature of T. We have shown that some definitional sentences in Russian illustrate a redundant system with full copying of features (EPP, Nominative, Present), while others illustrate either a non-null-subject system (with a covert copula) or a null-subject system (with only an overt copula).

Semantically, definitional sentences introduce an identity/identification between two kind entities. Both NP1 and NP2 are kind-referring entities, whereas \( \textit{èto} \) is not referential. The copula \( \textit{be} \) maps a kind entity (the one corresponding to NP2) to itself (identity function), while the presentational pronoun \( \textit{èto} \) is a two-place relation that maps this kind entity into a function that looks for another kind entity (the one corresponding to NP1) to finally compose a definitional generic sentence.
Abbreviations
NOM = nominative, ACC = accusative, GEN = genitive, INS = instrumental, M = masculine, F = feminine, N = neuter, SG = singular, PL = plural

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